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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,225	03/16/2004	Zeying Ma	200309561-1	5644
22879 7590 10/07/2009 HEWLETT-PACKARD COMPANY Intellectual Property Administration 3404 E. Harmony Road Mail Stop 35 FORT COLLINS, CO 80528			EXAMINER FERGUSON SAMRETH, MARISSA LIANA	
			ART UNIT 2854	PAPER NUMBER
			NOTIFICATION DATE 10/07/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/803,225

Applicant(s)

MA ET AL.

Examiner

MARISSA L. FERGUSON-SAMRETH

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-6, 10-17, 19-22 and 26-41 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 3-6, 10-17, 19-22 and 26-41 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/11/09
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 10-14, 16, 17, 19, 20, 22, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsao (US Publication 2005/0168554) in view of Iijima (JP 2001-049155) and Nagata et al. (US Patent 6,585,366).

Regarding claims 1,4, 14, 17, 20, 22 and 27, Tsao teaches offset media (Paragraph 0030), b) ink-jet ink being configured to be ink-jetted onto the offset media (Paragraph 0030), c) a fixer composition including a crashing agent that is reactive with a component of the ink-jet ink, said fixer composition being configured to be overprinted or underprinted on the offset media with respect to the ink-jet ink (Paragraphs 0025, 0026, 0028 and 0033) and d) a calendering device configured for applying pressure and heat to offset media once the ink-jet ink is ink-jetted thereon, and wherein the heat to be applied is from 20°C to 90°C (Paragraphs 0033 and 0034).

However, Tsao does not explicitly disclose an aqueous ink-jet ink comprising latex particulates from 0.1wt% to 15wt%, 20nm to 500nm and 10,000Mw to 2,000,000 Mw dispersed therein and including a pigment colorant and wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi. Iijima teaches an aqueous ink-jet ink comprising latex particulates 0.1wt% to 15wt%, 20nm to 500nm and

10,000Mw to 2,000,000 Mw dispersed therein and including a pigment colorant (Solution, Paragraph 0013 and Paragraph 0017).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Tsao to replace the ink-jet ink thereof with an ink-jet ink with an aqueous ink-jet ink comprising latex and pigment as taught by Iijima for the purpose of obtaining an image with high waterproof and abrasion resistance thereby providing good ink preservation.

However, Tsao does not explicitly disclose wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi. Nagata teaches wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi, wherein the heat to be applied is from 20° to 90°C (Column 5, lines 19-27).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Wong to replace the rollers thereof with the rollers applying a pressure from 500-3000 psi as taught by Nagata et al. for the purpose of providing a higher quality image.

Regarding claims 3 and 19, Tsao teaches wherein the crashing agent is present in the fixer composition at from 0.1 wt% to 10 wt% (Page 3, Table 1, Fixer A, Polyguanidine 4.0%).

Regarding claims 10 and 26, Tsao teaches wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids, and combinations thereof (Paragraphs 0026-0028).

Regarding claim 11, Tsao teaches wherein the crashing agent is a cationic polymer selected from the group consisting polyguanides (Page 3, Table 1, Fixer A).

Regarding claim 12, Tsao teaches wherein the crashing agent is a multivalent metal ion or ionic group is provided by a member selected from the group consisting of multivalent metal nitrates, EDTA salts, phosphonium halide salts, organic acids, chloride salts, and combinations thereof (Paragraph 0028).

Regarding claim 13, Tsao teaches wherein the crashing agent is an acid selected from the group consisting of succinic acid and glutaric acid (Paragraph 0028).

Regarding claim 16, Tsao teaches wherein the calendering device includes a pair of rollers that are configured to apply pressure and heat to the offset media once the ink-jet ink is printed thereon (Paragraphs 0033-0034).

2. Claims 5, 6, 15, 21 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable Tsao (US Publication 2005/0168554) in view of Iijima (JP 2001-049155) and Nagata et al. (US Patent 6,585,366) as applied to claims 1, 4, 10-14, 16, 17, 19, 20, 22, 26 and 27 and further in view of O'Connor et al. (JP 2002-207275).

Tsao, as modified, teaches the claimed invention and method as disclosed above with the exception of an overcoat composition including a liquid vehicle having latex particulates dispersed therein and the composition is from 0.1 to 0.5wt%.

O'Connor et al. teaches an overcoat composition containing water dispersible latex particles (Solution and note: it is obvious to have some weight composition). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention taught by Tsao, as modified, to

include a an overcoat composition with a liquid vehicle as taught by O'Connor et al. for the purpose of providing an image with a protective overcoat.

3. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable Tsao (US Publication 2005/0168554) in view of Iijima (JP 2001-049155) and Nagata et al. (US Patent 6,585,366) and applied to claims 1, 4, 10-14, 16, 17, 19, 20, 22, 26 and 27 above and further in view of Tamagawa et al. (US Publication 2003/0198885).

Tsao, as modified, teaches the claimed invention with the exception of a step of applying heat to the printed image to contribute to the physical property of the image being altered and a physical property is smoothness, wherein upon applying pressure, the printed image is modified from having a textured profile to a smoother profile. Tamagawa et al. provides the calendaring treatment in order to alter the appearance of a substrate by providing a smooth surface (Paragraph 0011).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Tsao, as modified, to create smoothness as a physical attribute as taught by Tamagawa et al., since Tamagawa et al. teaches it is advantageous to form an image having superior image quality and gloss.

4. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsao (US Publication 2005/0168554) in view of Iijima (JP 2001-049155) and Nagata et al. (US Patent 6,585,366) and applied to claims 1, 4, 10-14, 16, 17, 19, 20, 22, 26 and 27 above and further in view Deguchi et al. (JP 02026747).

Tsao, as modified, teaches the claimed invention with the exception of wherein the physical property is flow, wherein upon applying pressure, the printed image is temporarily modified from a more solid configuration to a more liquid configuration.

Deguchi et al. teaches a hot melt type ink jet printer that melts the printing ink on a paper and softens the ink due to pressure applied by a device (Purpose and Constitution).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Tsao, as modified, to include a printing image that is temporarily modified due to pressure as taught by Deguchi et al., since Deguchi et al. teaches that it is advantageous to add heat in order to make the printed image into a more liquid configuration.

5. Claims 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable Tsao (US Publication 2005/0168554) in view of Iijima (JP 2001-049155), O'Connor et al. (JP 2002-207275) and Nagata et al. (US Patent 6,585,366)

Regarding claims 31 and 38-40, Tsao teaches offset media (Paragraph 0030), b) ink-jet ink being configured to be ink-jetted onto the offset media (Paragraph 0030), c) a fixer composition including a crashing agent that is reactive with a component of the ink-jet ink, said fixer composition being configured to be overprinted or underprinted on the offset media with respect to the ink-jet ink (Paragraphs 0025, 0026, 0028 and 0033) and d) a calendering device configured for applying pressure and heat to offset media once

the ink-jet ink is ink-jetted thereon, and wherein the heat to be applied is from 20°C to 90°C (Paragraphs 0033 and 0034).

However, Tsao does not explicitly disclose an aqueous ink-jet ink comprising latex particulates from 0.1wt% to 15wt%, 20nm to 500nm and 10,000Mw to 2,000,000 Mw dispersed therein and including a pigment colorant, an overcoat composition including a liquid vehicle having latex particulates dispersed therein, said overcoat composition being configured to be overcoated with respect to the ink-jet ink, said latex particulates being present in the overcoat composition at from 0.1 to 15wt% and wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi.

Iijima teaches an aqueous ink-jet ink comprising latex particulates 0.1wt% to 15wt%, 20nm to 500nm and 10,000Mw to 2,000,000 Mw dispersed therein and including a pigment colorant (Solution, Paragraph 0013 and Paragraph 0017).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Tsao to replace the ink-jet ink thereof with an ink-jet ink with an aqueous ink-jet ink comprising latex and pigment as taught by Iijima for the purpose of obtaining an image with high waterproof and abrasion resistance thereby providing good ink preservation.

However, Iijima does not explicitly disclose an overcoat composition including a liquid vehicle having latex particulates dispersed therein, said overcoat composition being configured to be overcoated with respect to the ink-jet ink, said latex particulates being present in the overcoat composition at from 0.1 to 15wt% and wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi.

O'Connor et al. teaches an overcoat composition containing water dispersible latex particles (Solution and note: it is obvious to have some weight composition). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention taught by Tsao, as modified, to include an overcoat composition with a liquid vehicle as taught by O'Connor et al. for the purpose of providing an image with a protective overcoat.

However, O'Conner does not explicitly disclose wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi.

Nagata teaches wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi, wherein the heat to be applied is from 20° to 90°C (Column 5, lines 19-27). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Wong to replace the rollers thereof with the rollers applying a pressure from 500-3000 psi as taught by Nagata et al. for the purpose of providing a higher quality image.

Regarding claims 32 and 33, Tsao teaches a fixer composition is present and includes a crashing agent that is reactive with a component of the ink-jet ink, said fixer composition being configured to be overprinted or underprinted on the offset media with respect to the ink-jet ink (Paragraphs 0028 and 0033) and wherein the fixer composition is from 0.1wt% to 10wt% (Page 3, Table 1, Fixer A polyguandine).

Regarding claim 34, Tsao teaches wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids, and combinations thereof (Paragraphs 0026-0028).

Regarding claim 35, Tsao teaches wherein the crashing agent is a cationic polymer selected from the group consisting of polyguanides (Page 3, Table 1, Fixer A).

Regarding claim 36, Tsao teaches wherein the crashing agent is a multivalent metal ion or ionic group is provided by a member selected from the group consisting of multivalent metal nitrates, EDTA salts, phosphonium halide salts, organic acids, chloride salts, and combinations thereof (Paragraph 0028).

Regarding claim 37, Tsao teaches wherein the crashing agent is an acid selected from the group consisting of succinic acid and glutaric acid (Paragraph 0028).

Regarding claim 41, Tsao teaches wherein the calendering device includes a pair of rollers that are configured to apply pressure and heat to the offset media once the ink-jet ink is printed thereon (Paragraphs 0033-0034).

Response to Arguments

6. Applicant's arguments with respect to claims 1,3-6,10-22, 26-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARISSA L. FERGUSON-SAMRETH whose telephone number is (571)272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARISSA FERGUSON-SAMRETH/
Examiner, Art Unit 2854

/Judy Nguyen/
Supervisory Patent Examiner, Art Unit 2854